

# **Appendix A**

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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In the Matter of	)	
	)	
Federal-State Joint Board on Universal	)	CC Docket No. 96-45
Service	)	
	)	
High Cost Universal Service Support	)	WC Docket No. 05-337
	)	
_____	)	

**Declaration of David C. Blessing**

March 27, 2006

My name is David C. Blessing. For the last thirteen years, I have been a principal in the consulting firm of Parrish, Blessing & Associates, Inc. I have over sixteen years of experience in the area of telecommunications regulation and economic analysis beginning with various managerial positions at Rochester Telephone Company in Rochester New York. I have represented telephone companies in a number of regulatory proceedings before the Federal Communications Commission ("FCC") and state regulatory commissions in Alaska, Arkansas, Florida, Georgia, Kansas, Kentucky, Missouri, Nebraska, New York, Ohio, Pennsylvania, Texas, Wisconsin and Puerto Rico. I have had extensive experience analyzing and working with the Commission's Hybrid Cost Proxy Model (HCPM) Model and its predecessor Models in both in the context of universal service and unbundled network elements. I have been working with Puerto Rico Telephone Company (PRT) for the last fourteen years and have a thorough knowledge of the company's costs and operations. My professional background also includes an appointment to the faculty of Nazareth College of Rochester, where I taught courses in economics and finance. I hold a Baccalaureate of Arts from Kalamazoo College and a Master of Arts in Economics from Fordham University. A detailed summary of my background is included as EXHIBIT DCB-1.

## **Introduction**

The use by the FCC of its forward-looking HCPM to determine the level of federal universal service high cost dollars that are distributed to non-rural incumbent local exchange carriers (ILECs) assumes that the Model provides reasonable estimates for each state's non-rural study areas. To the extent that the Model does not yield accurate estimates for a subset of the non-rural ILECs, the goals that the Model is attempting to promote will not be realized. In this declaration, I will discuss why the HCPM Model does not produce a consistent estimate of forward-looking costs for Puerto Rico and how this failure renders the Model inappropriate for use in the determination of federal high cost funding for Puerto Rico and other insular areas.

The FCC's universal service high cost fund distribution mechanism is intended to "enable non-rural carriers' rates ... to remain affordable and reasonably comparable in all regions of the nation."<sup>1</sup> The program is designed to increase subscribership by keeping rates affordable.<sup>2</sup> In 1999, when the FCC adopted its rules requiring that the HCPM be used to determine the level of high cost loop support for non-rural ILECs, the nationwide subscribership rate was 94.2%.<sup>3</sup> At that same time, Puerto Rico's subscribership rate was 74% – far lower than the national average and far below the rate of any other state. The Puerto Rico wireline penetration rate has deteriorated to roughly 60% in more recent years.

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<sup>1</sup> *Federal-State Joint Board on Universal Service*, Ninth Report and Order, 14 FCC Rcd 20432, ¶ 2 (1999) ("*Ninth Report and Order*") (footnote omitted).

<sup>2</sup> *Federal-State Joint Board on Universal Service*, Report and Order, 12 FCC Rcd 8776, ¶ 8 (1997) ("*First Report and Order*").

<sup>3</sup> *Id.* ¶ 7.

These basic statistics indicate that if any non-rural area in the United States *needed* federal support it was, and is, Puerto Rico. Given the statutory mandate to preserve and advance universal service, *i.e.*, increasing and maintaining subscribership at nationally acceptable levels, determining the level of high cost loop support in Puerto Rico should only be done pursuant to a methodology that has a high degree of certainty in its ability to estimate costs. As demonstrated below, the HCPM does not offer this level of certainty in the case of Puerto Rico and should be abandoned.

The impact of the change of support distribution mechanisms has dramatically impacted Puerto Rico. As the table below shows, Puerto Rico's high cost support fell from approximately \$50 million in 2000 under the embedded cost mechanism to \$0 under the HCPM-based Model.<sup>4</sup>

**Puerto Rico High-Cost Loop Support Payments**

1998	\$	47,664,546
1999	\$	44,084,088
2000	\$	50,196,942
2001	\$	20,421,414
2002	\$	1,243,368
2003	\$	2,951,487
2004	\$	0
2005	\$	0

The purpose of replacing the old distribution mechanism with the HCPM-based methodology was to ensure sufficient support but at the same time eliminate negative incentives seen to be inherent in the embedded methodology. The Commission explained that using forward-looking costs will provide sufficient support without giving carriers an incentive to inflate their costs or to refrain from efficient cost-cutting.<sup>5</sup>

That the HCPM-based methodology would achieve these dual goals was based on the assumption that the Model accurately estimated the relative forward-looking costs of all states.

"As a result of this examination of the Model, we have concluded in the Inputs Order that the Model generates reasonably accurate estimates of forward-looking costs and that the Model is the best basis for determining non-rural carriers' high-cost support in a competitive environment."<sup>6</sup>

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<sup>4</sup> See *Universal Service Monitoring Report*, CC Docket No. 98-202, Table 3.22 (2005) ("*2005 Monitoring Report*").

<sup>5</sup> *Ninth Report and Order*, ¶ 19.

<sup>6</sup> *Id.* ¶ 40.

As demonstrated below, the failure of this assumption in the case of Puerto Rico renders the Model inappropriate for use in determining Puerto Rico's support level. In Puerto Rico's case, the result of this flawed assumption is the loss of \$50 million annually in universal service support for a territory with a significantly lower telephone penetration rate than any other state.

Why was Puerto Rico not among those states that received federal support for their non-rural study areas? The answer to this question lies in the logic and inputs used to build the HCPM Model. The high-cost loop mechanism employed by the FCC relies on the comparison of HCPM estimates from individual states to an estimated national average. For the methodology to function properly, states must be relatively homogeneous so that any estimation error is reasonably systematic across states. For insular areas, such as Puerto Rico, the homogeneity condition does not hold. Puerto Rico is not just geographically isolated from most other states, it is also demographically, culturally and socio-economically very distinct. Puerto Rico is an outlier in the truest sense and thus it is almost certain that estimation error in Puerto Rico is not proportional to that of the other states. As an extreme outlier, there are also significant concerns about using nationwide Model results in Puerto Rico. The largest set of Model inputs is based on national averages that grossly underestimate the actual costs to construct a network in Puerto Rico relative to the national average. While a much smaller set of inputs is based on state-specific data, the use of nationwide averages results in the Model not accurately reflecting actual costs in Puerto Rico.

**The methodology used by the Commission to determine whether non-rural ILECs receive federal support relies on the assumption that the states are relatively homogeneous.**

The FCC's comparison methodology (comparing a state's forward-looking cost to two standard deviations above the national average forward-looking result) relies on the assumption that the states are relatively similar or homogeneous. This assumption allows for the results to be reasonable because any error will be systematic, *i.e.*, will be similar or proportional across states and will be cancelled out in the comparison. For example, imagine we are attempting to measure the length of two poles, one 36 inches and the other 72 inches. To perform the measurements we use a yard stick that is actually 40 inches long. The incorrect calibration of the yard stick will result in the individual measurements being off – the first pole being measured at 0.9 of a yard and the second measuring 1.8 yards. However, even with the incorrectly calibrated yardstick, a comparison of the measurements will correctly reveal that one is twice as long as the other.

The same holds when interpreting the results of the HCPM Model. Even if the individual HCPM estimates are wrong a comparison of two estimates will be valid if the estimation error is proportional. In effect, as long as the error is systematic, a comparison of results generated using the HCPM, with all of its flaws, will be valid because the comparison methodology cancels out the systematic error. In other words, if the Model systematically understates or overstates forward-looking cost, comparing individual state

results to the national average will still yield the correct relative result. The equations below help illustrate this effect:

$$(\text{FLEC (State 1)} + e(i)) / (\text{FLEC (Nationwide)} + e(n)).$$

Equation 1 is the ratio of one state's FLEC estimate to the nationwide average. The FLEC estimate is equal to the actual FLEC plus the error of the estimate ( $e$ ). If the error is systematic it follows that the ratio of the errors will equal the ratio of the FLECs.

As long as:  $\text{FLEC (State } i) / \text{FLEC (Nationwide)} = e(i)/e(n)$ , then

$$\text{FLEC (State } i) / \text{FLEC (Nationwide)} = (\text{FLEC (State 1)} + e(i)) / (\text{FLEC (Nationwide)} + e(n)).$$

This result means that as long as the errors are systematic, the ratio of the estimates will yield the same result as the ratio of actual FLEC costs, mitigating any impact due to estimation error. Thus in order for the results to be valid, the Commission's methodology assumes that the Model's estimation errors are systematic and will be cancelled out when compared to the nationwide average estimate. However, if the Commission's Model generates estimates that are not systematic for a state or subset of states the comparison methodology will no longer be valid and the Model should not be used for that group of states. Returning to the yardstick example, if the first pole is measured with a yardstick that is actually 40 inches and the second is measured with one that is actually 45 inches, each with 36 equal calibrations, not only will the individual measurements be off but so to will any comparison of the relative lengths.

It is reasonable to expect that the Model errors will be proportional for the mainland states because they are relatively homogeneous.<sup>7</sup> However since Puerto Rico is so different from the mainland, it is not reasonable to expect proportional errors and, given its dramatically lower telephone penetration rate, the risk of ignoring this problem is too great to ignore.

**The HCPM Model is dependent on nationwide average inputs which are not applicable to Puerto Rico.**

The vast majority of the inputs used within the HCPM are based upon nationwide averages. In fact, the HCPM uses national average values for the major network inputs such as copper and fiber cable cost, digital loop carriers ("DLC"), switching, and engineering, furnishing and installation cost. The development of the national average inputs is laid out in the Commission's *Tenth Report and Order* on universal service.<sup>8</sup>

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<sup>7</sup> The actual forward-looking economic cost and the error term are not observable and therefore, the validity of the proportional error assumption cannot be proven.

<sup>8</sup> *Federal-State Joint Board on Universal Service*, Tenth Report and Order, 14 FCC Rcd 20156, ¶ 270 & n.566 (1999) ("*Tenth Report and Order*").

Further detail is provided in the HM5.0A Appendix B and the Inputs Portfolio documents provided with the Model.

The HCPM's investment inputs do not reflect the costs of purchasing and installing telecommunications equipment in Puerto Rico. The material, installation, freight and engineering costs were all based on averages from non-rural study areas of mainland states. The major loop cost investment components of the Model, copper and fiber cable and DLCs are all based on these averages. Many of these inputs were based on survey data that did not even include all non-rural study areas. Given the "black box" nature of the cost study, it is not even possible to know whether this averaging included Puerto Rico data at all. The *Tenth Report and Order* clearly states that the major cost inputs are based on nationwide averages.

In the *Inputs Further Notice*, we tentatively concluded that we should estimate the costs for DLCs based upon an average of contract data submitted on the record, adjusted for cost changes over time. These contract data included data submitted to the Commission in response to the *1997 Data Request*, [FN566] and in *ex parte* submissions following the December 11, 1998 workshop we sponsored, to estimate the costs of DLCs in the Model.<sup>9</sup>

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[FN566] In response to the *1997 Data Request*, Ameritech, Bell Atlantic (including NYNEX), BellSouth, SBC, US West, GTE, Sprint, ATU, and PRT originally submitted data to the Commission on DLC costs in 1997. Bell South, US West and ATU resubmitted their data on the record of this proceeding subject to the *Protective Order*. See Letter from William W. Jordan, BellSouth, to Magalie Roman Salas, FCC, dated March 15, 1999; Letter from Robert B. McKenna, US West, to Magalie Roman Salas, FCC, dated March 8, 1999; Letter from Alane C. Weixel, counsel for ATU, to Magalie Roman Salas, FCC, dated May 6, 1999 (ATU May 6, 1999 *ex parte*).

We sought to supplement the record with respect to cable and structure costs by requesting additional data from LECs, including competitive LECs, in the form of a voluntary survey of structure and cable costs. Ten companies eventually responded to the survey.<sup>10</sup>

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<sup>9</sup> *Tenth Report and Order*, ¶ 270, n.566.

<sup>10</sup> *Id.* ¶ 89 (footnote omitted). Companies that responded included BellSouth, Ameritech, Pacific Bell, Nevada Bell, Southwestern Bell, Sprint, GTE, Aliant, SNET, and AT&T. These carriers submitted data in response to the structure and cable cost survey. PRT did not provide data in this round.

As discussed in this section, we adopt nationwide average values for estimating cable and structure costs in the Model rather than company-specific values.<sup>11</sup>

Actual Puerto Rico data are significantly different from the nationwide inputs used in the HCPM. These differences are demonstrated by the table below that shows the differences between the nationwide inputs for copper cable, NIDs, Digital Loop Carriers and Poles and the actual cost to provision these items in Puerto Rico today.<sup>12</sup>

**Table 1:  
PRT inputs vs. HCPM Model**

	<b>PRT</b>	<b>HCPM Default Value</b>	<b><u>% Difference</u></b>
<b>NID</b>			
Residence – 2 line	\$ 94.23	\$ 25.00	377%
Business - 6 line	\$ 147.89	\$ 40.00	370%
<b>Copper Distribution Cable</b>			
4200	\$ 52.52	\$ 29.00	181%
3600	\$ 46.02	\$ 26.00	177%
3000	\$ 39.14	\$ 23.00	170%
2400	\$ 31.98	\$ 20.00	160%
1800	\$ 31.59	\$ 16.00	197%
1200	\$ 19.24	\$ 12.00	160%
900	\$ 18.22	\$ 10.00	182%
600	\$ 10.96	\$ 7.75	141%
200	\$ 5.22	\$ 4.25	123%
100	\$ 4.11	\$ 2.50	164%
50	\$ 3.17	\$ 1.63	194%
<b>Pole Investment</b>	\$ 562.92	\$ 417.00	135%
<b>DLC (w/o port)</b>			
High Density	\$ 103.71	\$ 58.33	178%
Low Density	\$ 518.53	\$ 115.42	449%

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<sup>11</sup> *Id.* ¶ 90.

<sup>12</sup> The HCPM input values are derived from the HAI Model Release 5.0a Inputs Portfolio provided with the HCPM Model. PRT's investment values are based on the actual current prices paid by PRT for network equipment and materials.



As the table clearly illustrates, today's cost of provisions network facilities in Puerto Rico is much higher than the input values contained within the HCPM.<sup>13</sup>

A major reason for the difference between nationwide averages and actual Puerto Rico cost are the significant cost differences resulting from the nature of the island's service territory. Puerto Rico's differences include geographic isolation and the need to import most, if not all, energy, materials and equipment. Puerto Rico must import all of its telecommunication equipment as well as energy increasing the cost of these items relative to other states. In addition, the harsh tropical climate and topographical challenges faced in constructing a network in Puerto Rico limits severely the useful life of such equipment.

Once forward-looking investment levels are determined, the Model applies cost factors to generate forward-looking expenses. Just as in the case of investment, the expense factors are based on nationwide averages. Expense factors in the Model are developed by averaging the values found in the ARMIS reports filed by carriers serving the largest non-rural study areas.<sup>14</sup> The factors were adjusted based on a ratio of current to book investment ratios derived from data obtained only from Ameritech, Bell Atlantic, Bell South, GTE and SBC.<sup>15</sup> Finally, the Model estimates common costs at \$7.32 per line based on national average data.<sup>16</sup>

In sum, the nationwide averages are not reflective of costs in Puerto Rico and, as will be demonstrated below, result in the Model underestimating the cost to construct a network in Puerto Rico.

#### **Use of state specific inputs are based on flawed mainland assumptions.**

The only state-specific data included in the Model are line counts, traffic data, and service area. The inputs are generally reflective of the access line density found in Puerto Rico. The HCPM by design relies on the assumption that a primary driver in determining loop cost is line density.<sup>17</sup>

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<sup>13</sup> The inputs shown in the above table represent those that could be compared on an apples to apples basis. They represent 36% of the total estimated HCPM investment for Puerto Rico.

<sup>14</sup> *Tenth Report and Order*, ¶ 346.

<sup>15</sup> *Id.* ¶ 347.

<sup>16</sup> *Id.* ¶ 382.

<sup>17</sup> In the *Local Competition Order* the FCC published its proxy UNE loop rates. For many states, Puerto Rico included, the proxy value was based on a comparison of line density to states where forward-looking loop cost estimates had been produced. In Puerto Rico's case, it was assigned a UNE loop rate proxy equal to the estimated UNE rate for New Jersey because of a similar density.

Our default loop cost proxies for Hawaii and Puerto Rico are based on the default loop cost proxies of the states that most closely approximate them in population density per square mile. [FN1877] We are not setting default loop cost proxies in this Order for Alaska or for any of the remaining non-contiguous areas subject to the 1996 Act requirement that incumbent LECs offer unbundled loop elements. We are not establishing default loop cost proxies for these areas because we are unsure that comparisons of the population densities of the continental states and of Alaska and other non-contiguous areas subject to the 1996 Act fully capture differences in loop costs.

[FN1877] There is a strong (negative) correlation between population density and the loop costs reported by all the cost Models. The correlation is significant at the 5% level. Population densities are from The Statistical Abstract of the United States 1995, Table Number 23. For Puerto Rico, land area is from Table 361 and population is from Table 1345.<sup>18</sup>

The relationship in Puerto Rico between density and cost is not the same as in the mainland. While Puerto Rico network costs exhibit the same negative slope (as density increases costs decrease), an area in New Jersey with a similar density to an area in Puerto Rico will have a lower cost. In effect, while the slope may be similar the intercept is higher in Puerto Rico. This results from the fact that conditions in Puerto Rico are not similar to conditions in New Jersey or other mainland states. As an geographically insular area, Puerto Rico is subject to higher costs due to the need to import the majority of the materials and equipment used in the network as well as the fuel and energy used you build and maintain the network. Thus, for each level of density costs in Puerto Rico are generally higher than those in mainland states.

These higher costs have been recognized by the Federal Government. The cost of living index in San Juan and the eastern area of Puerto Rico is 3.60% higher than Washington, D.C.<sup>19</sup> This cost of living differential is reflected in the fact that the Federal Government pays federal workers in Puerto Rico an additional 11.5%.<sup>20</sup> These higher prices also translate into higher material, construction, operational and maintenance costs for the telephone network. For example, according to the U.S. Office of Personnel

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<sup>18</sup> *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, First Report and Order, 11 FCC Rcd 15499, ¶ 794, n. 1877 (1996)(subsequent history omitted) (“*Local Competition Order*”).

<sup>19</sup> 2002 Nonforeign Area Cost-of-Living Allowance Survey Report: Caribbean and Washington, DC, Areas, 69 Fed. Reg. 6023 (Feb. 9, 2004).

<sup>20</sup> See U.S. Office of Personnel Management, Nonforeign Area Cost-of-Living Allowances, *available at* <http://www.opm.gov/oca/cola/rates.asp>

Management the cost of energy is 52% higher in San Juan and eastern Puerto Rico than it is in Washington D.C.<sup>21</sup>

### **Customer location data is not accurate for Puerto Rico.**

Similarly, the FCC has acknowledged that customer location has a significant impact on the forward-looking cost estimate.

The determination of customer locations relative to the wire center heavily influences a forward-looking cost Model's design of outside plant facilities. This is because assumptions about the locations of customers will determine the predicted loop length, which in turn will have a large impact on the cost of service and the technologies employed by the Model.<sup>22</sup>

Yet the methodology used by the HCPM Model to determine customer location, the road surrogate approach, is suspect in the case of Puerto Rico. The road surrogate customer location process allocates customer location based on the road address of the customer location using data from the Census Bureau.<sup>23</sup> Intuitively the road surrogate process is effective to the extent that customer addresses contains information about the road on which the address is located. However, the Census Bureau has acknowledged that significant problems exist with its address data in Puerto Rico.

The address landscape across Puerto Rico is a mix of styles and standards.<sup>24</sup>

There was a concern about Puerto Rico's unique addressing conventions and the use of Spanish. Most notable is the four line address where the urbanization name (neighborhood equivalent/connotation) is used to eliminate the tie between repeated street names in different urbanizations. In some instances, the urbanization, condominium or community/district name is used in lieu of a street name.<sup>25</sup>

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<sup>21</sup> 2002 Nonforeign Area Cost-of-Living Allowance Survey Report, 69 Fed. Reg. at 6029, Table 5. The energy cost comparison is made by dividing the cost of energy by the number of kilowatt hours.

<sup>22</sup> *Tenth Report and Order*, ¶ 33.

<sup>23</sup> *Id.* ¶ 43.

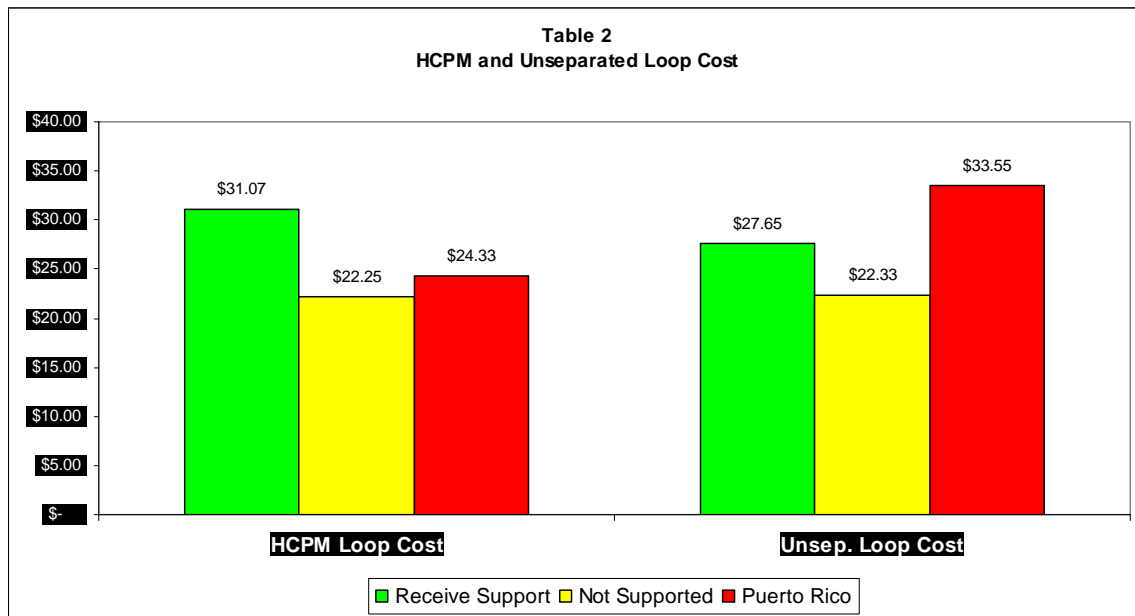
<sup>24</sup> U.S. Census Bureau, Census 2000 Testing, Experimentation and Evaluation Program, *Topic Report Series No. 14: Puerto Rico* (Sept. 30, 2003), available at [http://www.census.gov/pred/www/rpts/Puerto\\_Rico\\_FINAL.pdf#search='census%20bureau%20problems%20puerto%20rico](http://www.census.gov/pred/www/rpts/Puerto_Rico_FINAL.pdf#search='census%20bureau%20problems%20puerto%20rico).

<sup>25</sup> *Id.*

The Census Bureau’s own lack of confidence in the consistency of the unique address system in Puerto Rico is underscored by the Commission’s acknowledgement of the importance of a customer location methodology that depends on address. *Uncertain customer locations results in equal or greater uncertainty when designing outside plant facilities. Whether in the case of an actual network buildout or a hypothetical simulation, uncertain customer locations makes the estimation of network costs extremely problematic.* At a minimum, uncertain customer locations results in the presence of unique or unsystematic error in the HCPM’s estimates for Puerto Rico rendering the Model results unreliable. Thus, while the use of road surrogate data to determine customer location may be appropriate for the rest of the states, its use in Puerto Rico is not appropriate.

**A comparison of unseparated loop costs contained in ARMIS and HCPM results demonstrates that the HCPM does not reliably estimate costs in Puerto Rico.**

The most obvious evidence of the Model’s inability to accurately estimate forward-looking costs for Puerto Rico is the comparison of the unseparated loop costs for the states and Puerto Rico developed using the Commission’s Part 32 and 36 rules and the estimates of forward-looking loop cost estimated by the HCPM. Table 1 demonstrates that the Model results for mainland non-rural companies are relatively consistent with actual costs, but that HCPM results are significantly lower in Puerto Rico than actual costs.



Puerto Rico is an outlier when the difference between the forward-looking HCPM result and the unseparated loop cost is analyzed on an individual state basis.<sup>26</sup> In the case of those non-rural ILECs that receive federal support the average HCPM loop cost estimate was actually \$3.42 higher than the unseparated loop cost. For the non-rural ILECs in states that did not receive federal support the HCPM estimate was on average \$0.17 less than unseparated loop cost. For Puerto Rico, the HCPM loop cost estimate was \$9.22 below the unseparated loop cost. While some errors can be tolerable when the actual universal service results in a state are close to the national average, the significant size of these differences raise substantial doubts about whether the Congressional mandate to preserve and advance universal service is being served when considering an area with a less than 70 percent penetration rate.<sup>27</sup>

**The differences between Puerto Rico and the states are statistically significant.**

Analyzing the differences between those states where non-rural ILECs receive support and those where non-rural ILECs do not receive support shows that if Puerto Rico is to be grouped with one set of states or the other, it should be grouped with those states receiving support. Statistically significant differences exist with respect to the HCPM loop rate and unseparated loop cost between those states that receive support and those which do not. These results are presented in Exhibit DCB-4 attached.

Based on the relationship between the HCPM estimate and the non-rural unseparated loop cost for the states, one would expect that Puerto Rico's forward-looking cost estimate would be significantly higher than predicted by the HCPM. Running a simple linear regression with forward-looking cost as the independent (y) variable and unseparated loop cost as the dependent (x) variable and forecasting Puerto Rico's forward-looking cost result as a function of unseparated loop cost yields a significantly higher result.<sup>28</sup> Puerto Rico's estimated forward-looking cost using this regression

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<sup>26</sup> Please see Exhibit DCB-2 for HCPM and Unseparated Loop Cost data. The average unseparated loop cost was developed for only the non-rural ILECs in that state. There may be some omissions due to certain study areas changing ownership since the original HCPM was developed. See Exhibit DCB-3. Those cases are small enough that results are not biased.

<sup>27</sup> Only Georgia with an unseparated loop cost \$9.87 above the HCPM result joins Puerto Rico with a difference greater than \$9. Since the penetration rate in Georgia is 90.4%, perhaps this error is tolerable because the actual penetration rates seem to indicate that universal service is not in jeopardy in that state. In addition, while Bell South's Georgia operating company serving 4.3 million loops received \$7.2 and \$1.6 million in high cost support in 1998 and 1999 respectively under the former high cost system, PRT with its 1.3 million access lines received \$47.6 and \$44.2. See *2005 Monitoring Report*.

<sup>28</sup> The regression results are presented in Exhibit DCB-5.

methodology is \$29.78 – well above the nationwide average reported by the FCC of \$21.47 and the threshold established by the Commission to receive support.<sup>29</sup>

Table 3

Statistically Significant Differences

	Between Support and No Support	Between PR and Support	Between PR and No Support
HCPM Loop Cost	X	X	
Unseparated Loop Cost	X		X

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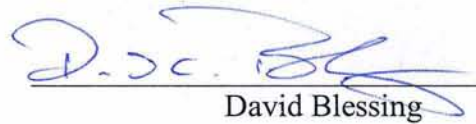
<sup>29</sup> See FCC, Hybrid Cost Proxy Model: Customer Location and Loop Design Modules, FCC file DOC-247659a1, *available at* <http://www.fcc.gov/wcb/tapd/hcpm/welcome.html> (2004 HCPM results and the Commission’s threshold calculation).

## Conclusion

There are serious doubts that the HCPM accurately estimates the costs of an efficient provider in Puerto Rico. Puerto Rico actual costs are significantly different from the nationwide average inputs that were derived from studies of mainland non-rural study areas. Puerto Rico loop costs are significantly higher than average mainland loop costs. These differences are graphically demonstrated by comparisons of unseparated loop costs with HCPM results. Furthermore, the customer location information in the Model does not accurately estimate customer location, and thus raise serious questions regarding how this input impacts other Model formulae. Given that the wireline penetration rate in Puerto Rico is currently below 70%, far lower than the roughly 94% penetration rate on the mainland, the Commission cannot afford to make errors in the mechanism it uses to support universal service in Puerto Rico. Therefore, the HCPM Model should not be used to estimate costs in Puerto Rico.

I swear under penalty of perjury that the foregoing is true to the best of my knowledge and belief.

Date 3/27/06

  
David Blessing

## **EXHIBIT DCB-1**

**David C. Blessing**  
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### **Professional Experience**

#### **Parrish, Blessing & Associates, Inc. - Economic Consultants, Ft. Washington, MD**

**Principal** (February 1993 to Present)

#### **Klick, Kent & Allen, Inc., Alexandria Va.**

**Consultant** (June 1991 to February 1993)

#### **Rochester Telephone Corporation, Rochester New York**

**Senior Economist** (January 1988 to June 1991)

#### **Nazareth College of Rochester, Rochester, New York**

**Assistant Professor - Department of Business** (1986 to 1988)

#### **Fordham University, New York, New York**

**Research and Teaching Assistant, Department of Economics** (1982-1984)

#### **Control Data Corporation, Minneapolis, Minnesota**

**Credit Analyst** (1980 to 1982)

### **Education**

**M.A.** Economics, Fordham University, New York, New York

**B.A.** Liberal Arts, Kalamazoo College, Kalamazoo, Michigan

Completed all requirements towards Ph.D. in Economics except dissertation at Fordham University.

### **Selected Testimony and Proceedings**

**Before the Federal Communications Commission:**

*In the Matter of Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Act of 1934, as amended, for Forbearance from Sections 251(c)(3) and 252(d)(1) in the Anchorage LEC Study Area.* WC 05-



281. Initial Statement Filed September 30, 2005. Reply Statement Filed February 23, 2006.

**Before the Regulatory Commission of Alaska:**

In the Matter of the Investigation of the Local Exchange Revenue Requirement, Depreciation, Cost of Service and Rate Design Studies Filed by ACS of Anchorage, Inc. d/b/a Alaska Communications Systems, ACS Local Service and ACS, Case U-01-34. August 2001.

In the Matter of the Investigation of the Local Exchange Revenue Requirement, Depreciation, Cost of Service and Rate Design Studies Filed by ACS of Fairbanks, Inc. d/b/a Alaska Communications Systems, ACS Local Service and ACS, Case U-01-83. Expert Testimony on the Appropriate Cost of Capital, August 2001.

In the Matter of the Investigation of the Local Exchange Revenue Requirement, Depreciation, Cost of Service and Rate Design Studies Filed by ACS of Alaska, Inc. d/b/a Alaska Communications Systems, ACS Local Service and ACS, Case U-01-85. Testimony on the Appropriate Cost of Capital, August 2001.

In the Matter of the Investigation of the Local Exchange Revenue Requirement, Depreciation, Cost of Service and Rate Design Studies Filed by ACS of the Northland, Inc. d/b/a Alaska Communications Systems, ACS Local Service and ACS, Case U-01-87. August 2001.

In the Matter of the Petition by GCI Communications Corp. d/b/a General Communication, Inc., and d/b/a GCI for Arbitration under Section 252 of the Telecommunications Act of 1996 with the Municipality of Anchorage d/b/a Anchorage Telephone Utility a/k/a ATU Telecommunications for the Purpose of Instituting Local Exchange Competition, Case U-96-89. Expert Testimony, February 2002 and August 2003. Final Hearing: November 2003

In the Matter of the Petition by GCI Communications Corp. d/b/a General Communication, Inc., and d/b/a GCI for Termination of Rural Exemption and Arbitration with PTI Communications of Alaska Inc. under 47 U.S.C. §§ 251 and 252 for the Purpose of Instituting Local Exchange Competition, Case U-97-82. Expert Testimony, March 2004.

In the Matter of the Petition by GCI Communications Corp. d/b/a General Communication, Inc., and d/b/a GCI for Termination of Rural Exemption and Arbitration with Telephone Utilities of Alaska Inc. under 47 U.S.C. §§ 251 and 252 for the Purpose of Instituting Local Exchange Competition, Cases U-97-82 and U-97-143. Expert Testimony, March 2004.

**Before the Arkansas Public Service Commission**

In the Matter of Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, L.P. d/b/a SBC Arkansas to Set Rates for Unbundled Network Elements, CC Docket No. 04-109-U, Expert Reply Testimony, May 27, 2005.

**Before the Georgia Public Service Commission:**

Universal Access Fund, Transition to Phase II Under O.C.G.A. Section 46-5-167, Docket No. 5825-U, Expert Testimony, July 2000.

**Before the State Corporation Commission of Kansas:**

In the Matter of an Audit and General Rate Investigation of S&A Telephone Company, Docket No. 03-S&AT-160-AUD, Expert Testimony, March 2003.

**Before the Public Service Commission of the Commonwealth of Kentucky**

In the Matter of an Inquiry into the Development of De-Averaged Rates for Unbundled Network Elements, Adm. Case No. 382, Expert Rebuttal Testimony, January 28, 2005.

**Before the Public Service Commission State of Missouri:**

In the Matter of an Investigation into Various Issues Related to the Missouri Universal Service, Case 98-329, Expert Testimony, August 2001.

**Before the Nebraska Public Service Commission:**

In the Matter of the Petition of Nebraska Technology and Telecommunications, Inc., for arbitration of interconnection rates, terms and conditions with Aliant Communications Co., d/b/a ALLTEL, Application No. C-2648, Expert Testimony, July 2002.

**Before the New York Public Service Commission:**

Petition of Fairpoint Communications Corp. For Negotiations/Mediation Pursuant to Section 252(a)(2) of the Telecommunications Act of 1996 and for approval of any resulting interconnection Agreement, 2000, Case 99-C-1337, Expert Testimony, Filed March 2000.

Petition of Rochester Telephone Corporation for Approval of Proposed Restructuring Plan, Case 93-C-0103, and, Petition of Rochester Telephone Corporation for Approval of a New Multi Year Rate Stability Agreement, Case 93-C-0033, Expert Testimony, Filed February 1993.

In the Matter of the Proceeding on Motion of The Commission as to the Rates, Charges, Rules and Regulations of Highland Telephone Company for Telephone Service, Case 91-C-0123. Expert Testimony, Filed February 1991.

In the Matter of the Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Rochester Telephone Corporation, Case 89-C-022. Expert Testimony, Filed February 1989.

**Before the Public Utilities Commission of Ohio:**

In the Matter of the Application of Ohiotelnets.com, Inc.'s Petition for Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with ALLTEL Ohio, Inc., Case No. 00-1601-TP-ARB,

Expert Testimony, 2000.

*In the Matter of the Application of Ameritech Communications Services, Inc.'s Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with the Western Reserve Telephone Company*, Case No. 01-31-TP-ARB, Expert Testimony, 2001.

**Before the Pennsylvania Public Utility Commission:**

*Joint Petition of Breezewood Telephone Company, Canton Telephone Company, Enterprise Telephone Company, Lakewood Telephone Company and Oswayo River Telephone Company for a Streamlined Form of Regulation and Plan for Network Modernization*, Case P-00940754, Expert Testimony, Filed January 1994.

*Pennsylvania Public Utility Commission, et al, Vs. Enterprise Telephone Company -- General Rate Proceeding*, Case R-922317, Expert Testimony, Filed April 1992.

*Petition of the Pennsylvania Telephone Association Small Company Group for Approval of an Alternate and Streamlined Form of Regulation and Network Modernization Plans*, Docket No. P-00981425 et al, Expert Testimony, Filed July 31, 1998

*Petition of ALLTEL Pennsylvania, Inc. For Approval of an Alternate and Streamlined Form of Regulation and Network Modernization Plans*, , Docket No. P-00981423, Expert Testimony, Filed July 31, 1998

**Before the Telecommunications Regulatory Board of Puerto Rico:**

*In re: Centennial Communications Corporation: Arbitration Petition Based on 47 USC 252(b), Chap. III, Art. 5(b) of the Puerto Rico Telecommunications Act of 1996, and on Tariffs, Terms and Conditions*, Expert Testimony, 1997.

*In re: Lambda Communications Corporation: Arbitration Petition Based on 47 USC 252(b), Chap. III, Art. 5(b) of the Puerto Rico Telecommunications Act of 1996, and on Tariffs, Terms and Conditions*, Expert Testimony, 1997.

*In re: Cellpage Communications: Arbitration Petition Based on 47 USC 252(b), Chap. III, Art. 5(b) of the Puerto Rico Telecommunications Act of 1996, and on Tariffs, Terms and Conditions*, Expert Testimony, 1997.

*Telefonica Larga Distancia de Puerto Rico, Inc., Plaintiff, v. Puerto Rico Telephone Company, Re: Puerto Rico Telephone Company Tariff K-2*, Case No. 97-Q-0001, 97-Q-0003, Expert Testimony, Phase 1: April 2000, Phase 2: May 2001.

*Lambda Communications, Inc., Sprint International Caribe, Inc. v. Puerto Rico Telephone Company, Defendant, Re: Suspension of PRTC's Intraisland Long Distance Tariff ("Your Answer Plan") and Requiring the Imputation of Costs Against PRTC*, Case No. JRT-99-Q-0080, Expert Testimony, February 2000.

*In re: RSV TELECOM, INC. Petition for Arbitration Pursuant to Section 47 U.S.C. 252(b) of the Federal Communications Act and Article 5(b), Chapter III, of the Puerto Rico Telecommunications Act – Interconnection Rates, Terms and Conditions*, Case No. JRT-2000-AR-0001, Expert Testimony, May 2000.

International Telecom Ltd., Complainant v. Puerto Rico Telephone Company, Defendant, Breach of Contract and Request for Declaratory Ruling. Case No. JRT-00-Q-0014, Expert Testimony, May 2001.

In the Matter of Arbitration of Interconnection Rates, Terms and Conditions between WorldNet Telecommunications Inc. and the Puerto Rico Telephone Company, Re: Petition for Interconnection, Case No. JRT-2001-AR-0002, Expert Testimony, November 2001.

In the Matter of Arbitration of Interconnection Rates, Terms and Conditions between Newcomm Wireless Services, Inc., and Puerto Rico Telephone Company, Re: Interconnection Arbitration, Case No. JRT-2002-AR-0001, Expert Testimony, April 2002.

Petition of Centennial Puerto Rico License Corporation for Arbitration Pursuant to Section 47 U.S.C. 252(b) of the Federal Communications Act of 1996 to Establish an Interconnection Agreement with Puerto Rico Telephone Company, Case No. JRT-2002-AR-0002, Expert Testimony, May 2002.

Re: Expansion of the Local Service Zones of the Puerto Rico Telephone Company, Inc., Case No. JRT-2004-CCG-0001, Expert Testimony, March – April 2004; June 2004.

Telefonica Larga Distancia De Puerto Rico, Inc., WorldNet Telecommunications, Inc., Sprint Communications Company, LP, and AT&T of Puerto Rico, Inc., Plaintiffs, v. Puerto Rico Telephone Company, Inc., Defendant. Case No.s JRT-2005-Q-0121, JRT-2005-Q-0128, JRT-2005-Q-0297, JRT-2004-Q-0068. Expert Testimony, August 4, 2005.

#### **In The United States District Court For the District of Puerto Rico**

*Telefonos Publicos de Puerto Rico, Inc. Plaintiff v. Puerto Rico Telephone Company, Defendant,* Civil Action 01-2519 GG, Expert Report, October 15, 2004.

#### **Before the Texas State Office of Administrative Hearings:**

Application of Texas ALLTEL, Inc., to Recover Lost Revenues and Costs of Implementing Expanded Local Calling Service Pursuant to P.U.C. Subst. R. 23.49(c)(12). SOAH Docket No. 473-98-0403, PUC Docket No. 17641, Expert Testimony, June 1998.

#### **Before the Public Service Commission of Wisconsin:**

*In the Matter of the Application of CenturyTel of the Midwest-Kendall, Inc. for Rate Increase and Petition for Emergency Order for Rate Increase,* Docket 2815-TR-103, Expert Testimony April 2000.

# Exhibit DCB-2

State		HCPM 2004 Monthly Cost- per-Loop	Annual Non- rural Unseparated Cost-per-Loop	Monthly Non-rural Unseparated Cost- per-Loop	Percent Households with Telephone
AK	Alaska	20.25	\$ 295.41	\$ 24.62	95.20
AL	Alabama	30.20	\$ 313.00	\$ 26.08	90.60
AR	Arkansas	26.68	\$ 353.13	\$ 29.43	87.70
AZ	Arizona	20.89	\$ 350.29	\$ 29.19	93.00
CA	California	17.43	\$ 182.45	\$ 15.20	94.50
CO	Colorado	23.26	\$ 336.27	\$ 28.02	95.00
CT	Connecticut	22.05	\$ 266.07	\$ 22.17	92.70
DC	District of Columbia	14.92	\$ 111.35	\$ 9.28	91.20
DE	Delaware	19.67	\$ 273.32	\$ 22.78	90.70
FL	Florida	19.87	\$ 320.10	\$ 26.68	91.60
GA	Georgia	22.03	\$ 382.82	\$ 31.90	90.40
HI	Hawaii	19.51	\$ 279.28	\$ 23.27	95.20
IA	Iowa	24.19	\$ 205.36	\$ 17.11	96.30
ID	Idaho	26.65	\$ 243.43	\$ 20.29	94.80
IL	Illinois	20.58	\$ 201.65	\$ 16.80	89.10
IN	Indiana	23.76	\$ 242.64	\$ 20.22	91.40
KS	Kansas	23.25	\$ 302.90	\$ 25.24	93.50
KY	Kentucky	29.11	\$ 341.64	\$ 28.47	90.10
LA	Louisiana	25.16	\$ 323.76	\$ 26.98	89.80
MA	Massachusetts	18.91	\$ 219.33	\$ 18.28	93.90
MD	Maryland	18.84	\$ 227.62	\$ 18.97	93.50
ME	Maine	28.42	\$ 275.11	\$ 22.93	95.40
MI	Michigan	23.13	\$ 241.24	\$ 20.10	91.50
MN	Minnesota	22.79	\$ 238.14	\$ 19.85	95.60
MO	Missouri	23.54	\$ 284.10	\$ 23.67	92.10
MS	Mississippi	36.43	\$ 406.64	\$ 33.89	86.70
MT	Montana	33.49	\$ 310.19	\$ 25.85	93.30
NC	North Carolina	22.98	\$ 306.98	\$ 25.58	91.40
ND	North Dakota	25.01	\$ 248.50	\$ 20.71	95.20
NE	Nebraska	29.30	\$ 302.29	\$ 25.19	94.50
NH	New Hampshire	23.90	\$ 280.82	\$ 23.40	94.40
NJ	New Jersey	18.14	\$ 239.63	\$ 19.97	93.90
NM	New Mexico	25.54	\$ 314.37	\$ 26.20	92.20
NV	Nevada	19.21	\$ 200.00	\$ 16.67	90.00
NY	New York	19.65	\$ 167.36	\$ 13.95	91.30
OH	Ohio	23.27	\$ 235.84	\$ 19.65	93.30
OK	Oklahoma	24.43	\$ 290.04	\$ 24.17	90.30
OR	Oregon	24.06	\$ 293.77	\$ 24.48	94.50
PA	Pennsylvania	20.24	\$ 249.62	\$ 20.80	94.30
PR	Puerto Rico	24.33	\$ 402.61	\$ 33.55	70.00
RI	Rhode Island	20.24	\$ 264.97	\$ 22.08	93.90
SC	South Carolina	25.64	\$ 345.98	\$ 28.83	93.20
SD	South Dakota	28.87	\$ 294.18	\$ 24.52	94.70
TN	Tennessee	25.62	\$ 308.29	\$ 25.69	90.50
TX	Texas	21.30	\$ 314.47	\$ 26.21	90.20
UT	Utah	20.65	\$ 290.39	\$ 24.20	96.90
VA	Virginia	21.22	\$ 287.35	\$ 23.95	91.20
VT	Vermont	30.73	\$ 318.71	\$ 26.56	96.70
WA	Washington	21.07	\$ 267.17	\$ 22.26	96.90
WI	Wisconsin	22.56	\$ 226.68	\$ 18.89	94.20
WV	West Virginia	30.90	\$ 347.02	\$ 28.92	91.50
WY	Wyoming	33.20	\$ 408.76	\$ 34.06	94.00

Source:

Annual USF Unseparated Cost-per-Loop Source: NECA's Overview of Universal Service Fund from 9/05 for Submission of 2004 Study Results  
(Available on FCC Website: <http://www.fcc.gov/wcb/iatd/neca.html>)

Monthly Useparated Cost-per-Loop Source: Annual USF Unseparated Cost-per-Loop / 12

Percent Households with Telephone Source: FCC Telephone Subscribership Report, Released 5/25/05, Data through 3/05,  
Table 3 Percentage of Households with Telephone by State (Available on FCC Website:  
[http://www.fcc.gov/Bureaus/Common\\_Carrier/Reports/FCC-State\\_Link/IAD/subs0305.pdf](http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/subs0305.pdf))

## EXHIBIT DCB-3.1

State	Unseparated Loop Cost			
	Company Average <sup>1</sup>	Monthly Cost	Statewide Average <sup>2</sup>	Monthly Cost
AK	\$ 295.41	\$ 24.62	\$ 486.51	\$ 40.54
AL <sup>3</sup>	\$ 313.00	\$ 26.08	\$ 347.27	\$ 28.94
AR	\$ 353.13	\$ 29.43	\$ 412.66	\$ 34.39
AZ	\$ 350.29	\$ 29.19	\$ 368.79	\$ 30.73
CA	\$ 182.45	\$ 15.20	\$ 187.49	\$ 15.62
CO	\$ 336.27	\$ 28.02	\$ 353.91	\$ 29.49
CT	\$ 266.07	\$ 22.17	\$ 266.00	\$ 22.17
DC	\$ 111.35	\$ 9.28	\$ 111.35	\$ 9.28
DE	\$ 273.32	\$ 22.78	\$ 273.32	\$ 22.78
FL <sup>3</sup>	\$ 320.10	\$ 26.68	\$ 322.13	\$ 26.84
GA	\$ 382.82	\$ 31.90	\$ 389.60	\$ 32.47
HI	\$ 279.28	\$ 23.27	\$ 300.88	\$ 25.07
IA	\$ 205.36	\$ 17.11	\$ 249.21	\$ 20.77
ID	\$ 243.43	\$ 20.29	\$ 318.76	\$ 26.56
IL	\$ 201.65	\$ 16.80	\$ 211.43	\$ 17.62
IN	\$ 242.64	\$ 20.22	\$ 248.53	\$ 20.71
KS	\$ 302.90	\$ 25.24	\$ 385.90	\$ 32.16
KY <sup>3</sup>	\$ 341.64	\$ 28.47	\$ 360.47	\$ 30.04
LA	\$ 323.76	\$ 26.98	\$ 355.66	\$ 29.64
MA	\$ 219.33	\$ 18.28	\$ 219.52	\$ 18.29
MD	\$ 227.62	\$ 18.97	\$ 228.04	\$ 19.00
ME	\$ 275.11	\$ 22.93	\$ 300.71	\$ 25.06
MI	\$ 241.24	\$ 20.10	\$ 250.77	\$ 20.90
MN <sup>3</sup>	\$ 238.14	\$ 19.85	\$ 280.47	\$ 23.37
MO <sup>3</sup>	\$ 284.10	\$ 23.67	\$ 325.24	\$ 27.10
MS	\$ 406.64	\$ 33.89	\$ 425.48	\$ 35.46
MT	\$ 310.19	\$ 25.85	\$ 396.79	\$ 33.07
NC	\$ 306.98	\$ 25.58	\$ 313.58	\$ 26.13
ND	\$ 248.50	\$ 20.71	\$ 362.84	\$ 30.24
NE	\$ 302.29	\$ 25.19	\$ 340.98	\$ 28.42
NH	\$ 280.82	\$ 23.40	\$ 283.07	\$ 23.59
NJ	\$ 239.63	\$ 19.97	\$ 240.31	\$ 20.03
NM	\$ 314.37	\$ 26.20	\$ 345.12	\$ 28.76
NV	\$ 200.00	\$ 16.67	\$ 215.23	\$ 17.94
NY	\$ 167.36	\$ 13.95	\$ 178.93	\$ 14.91
OH	\$ 235.84	\$ 19.65	\$ 241.58	\$ 20.13
OK <sup>3</sup>	\$ 290.04	\$ 24.17	\$ 343.64	\$ 28.64
OR	\$ 293.77	\$ 24.48	\$ 316.97	\$ 26.41
PA	\$ 249.62	\$ 20.80	\$ 254.44	\$ 21.20
PR	\$ 402.61	\$ 33.55	\$ 402.61	\$ 33.55
RI	\$ 264.97	\$ 22.08	\$ 264.97	\$ 22.08
SC	\$ 345.98	\$ 28.83	\$ 362.00	\$ 30.17
SD	\$ 294.18	\$ 24.52	\$ 418.63	\$ 34.89
TN	\$ 308.29	\$ 25.69	\$ 322.60	\$ 26.88
TX	\$ 314.47	\$ 26.21	\$ 331.06	\$ 27.59
UT	\$ 290.39	\$ 24.20	\$ 309.56	\$ 25.80
VA	\$ 287.35	\$ 23.95	\$ 290.11	\$ 24.18
VT	\$ 318.71	\$ 26.56	\$ 346.85	\$ 28.90
WA	\$ 267.17	\$ 22.26	\$ 283.26	\$ 23.61
WI	\$ 226.68	\$ 18.89	\$ 272.24	\$ 22.69
WV	\$ 347.02	\$ 28.92	\$ 373.99	\$ 31.17
WY	\$ 408.76	\$ 34.06	\$ 451.52	\$ 37.63
	\$ 258.54	\$ 21.55	\$ 275.67	\$ 22.97

<sup>1</sup> Unseparated Loop Cost using only companies contained within HCPM (non-rural companies)

<sup>2</sup> Unseparated Loop Cost using ALL companies (rural and non-rural) in a given state

<sup>3</sup> Alabama, Florida, Kentucky, Minnesota, Missouri, and Oklahoma have "missing" SA codes

## EXHIBIT DCB-3.2

State	SA Code	Company	USF Unseparated Rev Req	USF Loops	USF Cost per Loop
AK	613000	Anchorage Tel Util	\$ 44,850,581.52	151,826	\$ 295.41
		Total AK	\$ 44,850,581.52	151,826	\$ 295.41
AL	250281	Contel Of The South DbA Gte South	\$ -	-	#DIV/0!
	250293	Gte And Contel Of Alabama	\$ -	-	#DIV/0!
	255181	South Central Bell-Al	\$ 555,378,826.47	1,774,375	\$ 313.00
		Total AL	\$ 555,378,826.47	1,774,375	\$ 313.00
AR	405211	Southwestern Bell-Arkansas	\$ 324,835,565.34	919,866	\$ 353.13
		Total AR	\$ 324,835,565.34	919,866	\$ 353.13
AZ	455101	Mountain Bell-Arizona	\$ 828,446,764.86	2,365,023	\$ 350.29
		Total AZ	\$ 828,446,764.86	2,365,023	\$ 350.29
CA	542302	Contel Of California-California	\$ 109,163,640.65	408,505	\$ 267.23
	542319	Gte Of California	\$ 869,724,492.53	3,980,575	\$ 218.49
	545170	Pacific Bell	\$ 2,808,391,470.59	16,509,867	\$ 170.10
	542334	Roseville Telephone Company	\$ 49,155,324.31	128,563	\$ 382.34
		Total CA	\$ 3,836,434,928.08	21,027,510	\$ 182.45
CO	465102	Mountain Bell-Colorado	\$ 830,224,422.58	2,468,886	\$ 336.27
		Total CO	\$ 830,224,422.58	2,468,886	\$ 336.27
CT	135200	Southern New England Tel	\$ 561,555,938.41	2,110,570	\$ 266.07
		Total CT	\$ 561,555,938.41	2,110,570	\$ 266.07
DC	575020	C And P Telephone Company Of Wa Dc	\$ 88,113,590.68	791,292	\$ 111.35
		Total DC	\$ 88,113,590.68	791,292	\$ 111.35
DE	565010	Diamond State Tel Co	\$ 149,350,404.84	546,439	\$ 273.32
		Total DE	\$ 149,350,404.84	546,439	\$ 273.32
FL	210340	Central Tel Co Of Fl	\$ -	-	#DIV/0!
	210328	GTE Floridainc	\$ 760,656,172.17	2,139,947	\$ 355.46
	215191	Southern Bell-FL	\$ 1,952,730,432.84	6,063,101	\$ 322.07
	210341	United Tel Co Of Flo	\$ 539,615,448.59	1,959,251	\$ 275.42
		Total FL	\$ 3,253,002,053.60	10,162,299	\$ 320.10
GA	225192	Southern Bell-Ga	\$ 1,426,986,543.11	3,727,530	\$ 382.82
		Total GA	\$ 1,426,986,543.11	3,727,530	\$ 382.82
HI	623100	Gte Hawaiian Telephone Co Inc	\$ 185,493,906.28	664,194	\$ 279.28
		Total HI	\$ 185,493,906.28	664,194	\$ 279.28
IA	355141	Northwestern Bell-Ia	\$ 202,453,355.06	985,834	\$ 205.36
		Total IA	\$ 202,453,355.06	985,834	\$ 205.36
ID	475103	Mountain Bell-Idaho	\$ 118,141,044.80	485,320	\$ 243.43
		Total ID	\$ 118,141,044.80	485,320	\$ 243.43
IL	341036	Contel Of Illinois Inc DbA Gte - Illinois	\$ 28,653,304.46	125,121	\$ 229.00
	341015	Gte Of Illinois	\$ 164,180,422.68	614,125	\$ 267.34
	345070	Illinois Bell Tel Co	\$ 1,203,151,197.47	6,183,446	\$ 194.58
		Total IL	\$ 1,395,984,924.61	6,922,692	\$ 201.65
IN	320779	Contel Of Indiana Inc DbA Gte - Indiana	\$ 57,162,060.99	192,591	\$ 296.81
	320772	Gte Of Indiana	\$ 226,733,616.69	728,453	\$ 311.25
	325080	Indiana Bell Tel Co	\$ 459,597,587.20	2,143,137	\$ 214.45
		Total IN	\$ 743,493,264.88	3,064,181	\$ 242.64
KS	415214	Southwestern Bell-Kansas	\$ 343,190,143.03	1,133,026	\$ 302.90
		Total KS	\$ 343,190,143.03	1,133,026	\$ 302.90
KY	265061	Cincinnati Bell-Ky	\$ 59,451,929.07	196,362	\$ 302.77
	260407	Gte South Inc - Kentucky	\$ -	-	#DIV/0!
	265182	South Central Bell-Ky	\$ 380,460,204.22	1,091,285	\$ 348.64
		Total KY	\$ 439,912,133.29	1,287,647	\$ 341.64
LA	275183	South Central Bell-La	\$ 673,702,124.56	2,080,847	\$ 323.76
		Total LA	\$ 673,702,124.56	2,080,847	\$ 323.76
MA	115112	New England Tel-Ma	\$ 827,981,089.66	3,775,033	\$ 219.33
		Total MA	\$ 827,981,089.66	3,775,033	\$ 219.33
MD	185030	C And P Tel Co Of Md	\$ 819,143,234.69	3,598,762	\$ 227.62
		Total MD	\$ 819,143,234.69	3,598,762	\$ 227.62
ME	105111	New England Tel-Maine	\$ 182,352,851.68	662,838	\$ 275.11
		Total ME	\$ 182,352,851.68	662,838	\$ 275.11
MI	310695	Gte North Inc-Mi	\$ 220,393,002.25	684,070	\$ 322.18
	315090	Michigan Bell Tel Co	\$ 1,086,286,109.14	4,732,342	\$ 229.55
		Total MI	\$ 1,306,679,111.39	5,416,412	\$ 241.24
MN	361140	Contel Of Minnesota Inc DbA Gte Minnesota	\$ -	-	#DIV/0!
	365142	Northwestern Bell-Minnesota	\$ 449,388,474.40	1,887,050	\$ 238.14

## EXHIBIT DCB-3.2

State	SA Code	Company	USF Unseparated Rev Req	USF Loops	USF Cost per Loop
		Total MN	\$ 449,388,474.40	1,887,050	\$ 238.14
MO	421922	Contel Missouri DbA Gte Missouri	\$ -	-	#DIV/0!
	421186	Gte North Inc - Missouri	\$ -	-	#DIV/0!
	425213	Southwestern Bell-Missouri	\$ 671,212,231.63	2,362,597	\$ 284.10
		Total MO	\$ 671,212,231.63	2,362,597	\$ 284.10
MS	285184	South Central Bell-Mississippi	\$ 501,002,401.15	1,232,062	\$ 406.64
		Total MS	\$ 501,002,401.15	1,232,062	\$ 406.64
MT	485104	Mountain Bell-Montana	\$ 103,209,148.84	332,734	\$ 310.19
		Total MT	\$ 103,209,148.84	332,734	\$ 310.19
NC	230470	Carolina Tel And Tel Co	\$ 291,322,912.04	1,064,870	\$ 273.58
	230471	Central Tel Co-Nc	\$ 74,743,502.46	238,868	\$ 312.91
	230509	Contel Of North Carolina DbA Gte No Carolina	\$ 50,493,332.39	142,402	\$ 354.58
	230479	Gte South Inc - North Carolina	\$ 64,431,713.19	188,370	\$ 342.05
	230491	North State Tel Co-Nc	\$ 31,425,807.10	120,706	\$ 260.35
	235193	Southern Bell-Nc	\$ 715,984,796.27	2,246,305	\$ 318.74
		Total NC	\$ 1,228,402,063.45	4,001,521	\$ 306.98
ND	385144	Northwestern Bell-North Dakota	\$ 44,501,277.44	179,077	\$ 248.50
		Total ND	\$ 44,501,277.44	179,077	\$ 248.50
NE	371568	Lincoln Tel And Tele Co	\$ 70,906,822.90	265,455	\$ 267.11
	375143	Northwestern Bell-Nebraska	\$ 120,433,098.65	367,505	\$ 327.70
		Total NE	\$ 191,339,921.55	632,960	\$ 302.29
NH	125113	New England Tel-Nh	\$ 195,952,378.62	697,781	\$ 280.82
		Total NH	\$ 195,952,378.62	697,781	\$ 280.82
NJ	165120	New Jersey Bell	\$ 1,381,483,399.08	5,764,974	\$ 239.63
		Total NJ	\$ 1,381,483,399.08	5,764,974	\$ 239.63
NM	495105	Mountain Bell-New Mexico	\$ 249,734,766.73	794,410	\$ 314.37
		Total NM	\$ 249,734,766.73	794,410	\$ 314.37
NV	552348	Central Telephone Company - Nevada	\$ 144,569,101.55	801,937	\$ 180.27
	555173	Nevada Bell	\$ 89,142,901.96	366,617	\$ 243.15
		Total NV	\$ 233,712,003.51	1,168,554	\$ 200.00
NY	155130	New York Tel	\$ 1,627,182,306.84	10,176,986	\$ 159.89
	150121	Rochester Telephone Corp	\$ 141,400,325.57	390,584	\$ 362.02
		Total NY	\$ 1,768,582,632.41	10,567,570	\$ 167.36
OH	305062	Cincinnati Bell-Ohio	\$ 158,299,708.26	705,053	\$ 224.52
	300615	Gte North Inc-Oh	\$ 267,429,882.77	884,427	\$ 302.38
	305150	Ohio Bell Tel Co	\$ 818,523,081.69	3,721,182	\$ 219.96
	300661	United Tel Co Of Ohio	\$ 139,035,640.14	554,729	\$ 250.64
		Total OH	\$ 1,383,288,312.86	5,865,391	\$ 235.84
OK	432080	Gte Southwest Inc - Oklahoma	\$ -	-	#DIV/0!
	435215	Southwestern Bell-Oklahoma	\$ 401,573,888.54	1,384,536	\$ 290.04
		Total OK	\$ 401,573,888.54	1,384,536	\$ 290.04
OR	532416	Gte Of The Northwest	\$ 134,238,317.10	429,016	\$ 312.90
	535163	Pacific Northwest Bell-Oregon	\$ 360,548,639.57	1,255,243	\$ 287.23
		Total OR	\$ 494,786,956.67	1,684,259	\$ 293.77
PA	175000	Bell Of Pennsylvania	\$ 1,333,657,939.85	5,435,861	\$ 245.34
	170169	Gte North Inc-Pa And Contel	\$ 158,519,834.67	541,967	\$ 292.49
		Total PA	\$ 1,492,177,774.52	5,977,828	\$ 249.62
PR	633200	P R T C - Central	\$ 66,863,678.78	164,427	\$ 406.65
	633201	Puerto Rico Tel Co	\$ 408,271,611.20	1,015,700	\$ 401.96
		Total PR	\$ 475,135,289.98	1,180,127	\$ 402.61
RI	585114	New England Tel-Ri	\$ 130,127,927.91	491,107	\$ 264.97
		Total RI	\$ 130,127,927.91	491,107	\$ 264.97
SC	240479	Gte South Inc - South Carolina	\$ 46,343,009.76	165,055	\$ 280.77
	245194	Southern Bell-Sc	\$ 484,201,121.18	1,368,409	\$ 353.84
		Total SC	\$ 530,544,130.94	1,533,464	\$ 345.98
SD	395145	Northwestern Bell-South Dakota	\$ 59,262,915.85	201,450	\$ 294.18
		Total SD	\$ 59,262,915.85	201,450	\$ 294.18
TN	295185	South Central Bell-Tn	\$ 752,813,160.78	2,395,844	\$ 314.22
	290567	United Inter-Mountain Tel Co-Tn	\$ 58,074,320.22	234,426	\$ 247.73
		Total TN	\$ 810,887,481.00	2,630,270	\$ 308.29
TX	442114	Central Telephone Company Of Texas	\$ 70,718,216.72	206,294	\$ 342.80
	442154	Contel Of Texas Inc DbA Gte Texas	\$ 40,368,640.54	114,212	\$ 353.45
	442080	Gte Southwest Inc - Texas	\$ 523,689,010.23	1,430,992	\$ 365.96



## EXHIBIT DCB-3.2

State	SA Code	Company	USF Unseparated Rev Req	USF Loops	USF Cost per Loop
	445216	Southwestern Bell-Texas	\$ 2,676,425,534.52	8,778,111	\$ 304.90
		Total TX	\$ 3,311,201,402.01	10,529,609	\$ 314.47
UT	505107	Mountain Bell-Utah	\$ 280,011,316.91	964,276	\$ 290.39
		Total UT	\$ 280,011,316.91	964,276	\$ 290.39
VA	195040	C And P Tel Co Of Va	\$ 887,330,044.92	3,153,885	\$ 281.35
	190254	Central Tel Co Of Va	\$ 100,221,507.75	282,075	\$ 355.30
	190233	Contel Of Virginia Inc DbA Gte Virginia	\$ 171,501,915.54	599,093	\$ 286.27
	190567	United Inter-Mountain Tel Co-Va	\$ 29,007,917.49	99,550	\$ 291.39
		Total VA	\$ 1,188,061,385.70	4,134,603	\$ 287.35
VT	145115	New England Tel-Vt	\$ 109,301,093.27	342,946	\$ 318.71
		Total VT	\$ 109,301,093.27	342,946	\$ 318.71
WA	522416	Gte Northwest Inc - Washington	\$ 211,475,123.28	732,207	\$ 288.82
	525161	Pacific Northwest Bell-Washington	\$ 584,904,120.41	2,248,631	\$ 260.12
		Total WA	\$ 796,379,243.69	2,980,838	\$ 267.17
WI	330886	Gte North Inc-Wi	\$ 117,486,023.44	379,274	\$ 309.77
	335220	Wisconsin Bell	\$ 387,516,016.62	1,848,578	\$ 209.63
		Total WI	\$ 505,002,040.06	2,227,852	\$ 226.68
WV	205050	C And P Tel Co Of W Va	\$ 280,610,528.38	808,623	\$ 347.02
		Total WV	\$ 280,610,528.38	808,623	\$ 347.02
WY	515108	Mountain Bell-Wyoming	\$ 97,292,199.69	238,015	\$ 408.76
		Total WY	\$ 97,292,199.69	238,015	\$ 408.76
AK to NJ Subtotal			\$ 23,904,198,099.58	93,213,158	
NM to WY Subtotal			\$ 14,597,673,290.63	55,705,728	
Grand Total			\$ 38,501,871,390.21	148,918,886	\$ 258.54

**Exhibit DCB-4**  
**Tests for Significant Differences**

Not Including Alaska

	HCPM 2004 Monthly Cost-per- Loop	Annual Non- rural Unseparated Cost-per-Loop	Monthly Non- rural Unseparated Cost-per-Loop	Percent Households with Telephone
<u>Means</u>				
A. Supported States	31.07	331.75	27.65	92.75
B. States Not Supported	22.05	267.94	22.33	92.78
<b>PR Puerto Rico</b>	<b>24.33</b>	<b>402.61</b>	<b>33.55</b>	<b>70.00</b>
<u>Standard Deviation</u>				
A. Cost Support	2.56	45.15	3.76	3.00
B. No Cost Support	2.68	58.91	4.91	4.18
Standard Error of A. and B.	0.91	16.92	1.41	1.15
T-test 2/	9.93	3.77	3.77	-0.03
<b>Is Group A. Different from Group B.?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
PR t-test - Cost Support	-2.63	1.57	1.57	-7.58
<b>PR Statistically Different from Cost Support</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>Yes</b>
`				
	0.85	2.29	2.29	-5.45
<b>PR Statistically Different from No Cost Support</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

2/ Source: Frederick C. Mills, Statistical Methods, Henry Holt and Company, New York, Third Edition, pp. 217-22

3/ Cost estimates generated by the model using year-end 2002 line count data.

**Exhibit DCB-5**

**Regression Output: HCPM Estimate on Non-Rural Unseparated Loop Cost**

	HCPM 2004 Monthly Cost-per- Loop	Annual Non-rural Unseparated Cost- per-Loop	Monthly Non-rural Unseparated Cost- per-Loop
Alaska	20.25	\$ 295.41	\$ 24.62
Alabama	30.20	\$ 313.00	\$ 26.08
Arkansas	26.68	\$ 353.13	\$ 29.43
Arizona	20.89	\$ 350.29	\$ 29.19
California	17.43	\$ 182.45	\$ 15.20
Colorado	23.26	\$ 336.27	\$ 28.02
Connecticut	22.05	\$ 266.07	\$ 22.17
District of Columbia	14.92	\$ 111.35	\$ 9.28
Delaware	19.67	\$ 273.32	\$ 22.78
Florida	19.87	\$ 320.10	\$ 26.68
Georgia	22.03	\$ 382.82	\$ 31.90
Hawaii	19.51	\$ 279.28	\$ 23.27
Iowa	24.19	\$ 205.36	\$ 17.11
Idaho	26.65	\$ 243.43	\$ 20.29
Illinois	20.58	\$ 201.65	\$ 16.80
Indiana	23.76	\$ 242.64	\$ 20.22
Kansas	23.25	\$ 302.90	\$ 25.24
Kentucky	29.11	\$ 341.64	\$ 28.47
Louisiana	25.16	\$ 323.76	\$ 26.98
Massachusetts	18.91	\$ 219.33	\$ 18.28
Maryland	18.84	\$ 227.62	\$ 18.97
Maine	28.42	\$ 275.11	\$ 22.93
Michigan	23.13	\$ 241.24	\$ 20.10
Minnesota	22.79	\$ 238.14	\$ 19.85
Missouri	23.54	\$ 284.10	\$ 23.67
Mississippi	36.43	\$ 406.64	\$ 33.89
Montana	33.49	\$ 310.19	\$ 25.85
North Carolina	22.98	\$ 306.98	\$ 25.58
North Dakota	25.01	\$ 248.50	\$ 20.71
Nebraska	29.30	\$ 302.29	\$ 25.19
New Hampshire	23.90	\$ 280.82	\$ 23.40
New Jersey	18.14	\$ 239.63	\$ 19.97
New Mexico	25.54	\$ 314.37	\$ 26.20
Nevada	19.21	\$ 200.00	\$ 16.67
New York	19.65	\$ 167.36	\$ 13.95
Ohio	23.27	\$ 235.84	\$ 19.65
Oklahoma	24.43	\$ 290.04	\$ 24.17
Oregon	24.06	\$ 293.77	\$ 24.48
Pennsylvania	20.24	\$ 249.62	\$ 20.80
Rhode Island	20.24	\$ 264.97	\$ 22.08
South Carolina	25.64	\$ 345.98	\$ 28.83
South Dakota	28.87	\$ 294.18	\$ 24.52
Tennessee	25.62	\$ 308.29	\$ 25.69
Texas	21.30	\$ 314.47	\$ 26.21
Utah	20.65	\$ 290.39	\$ 24.20
Virginia	21.22	\$ 287.35	\$ 23.95
Vermont	30.73	\$ 318.71	\$ 26.56
Washington	21.07	\$ 267.17	\$ 22.26
Wisconsin	22.56	\$ 226.68	\$ 18.89
West Virginia	30.90	\$ 347.02	\$ 28.92
Wyoming	33.20	\$ 408.76	\$ 34.06
Puerto Rico	24.33	\$ 402.61	\$ 33.55

SUMMARY OUTPUT

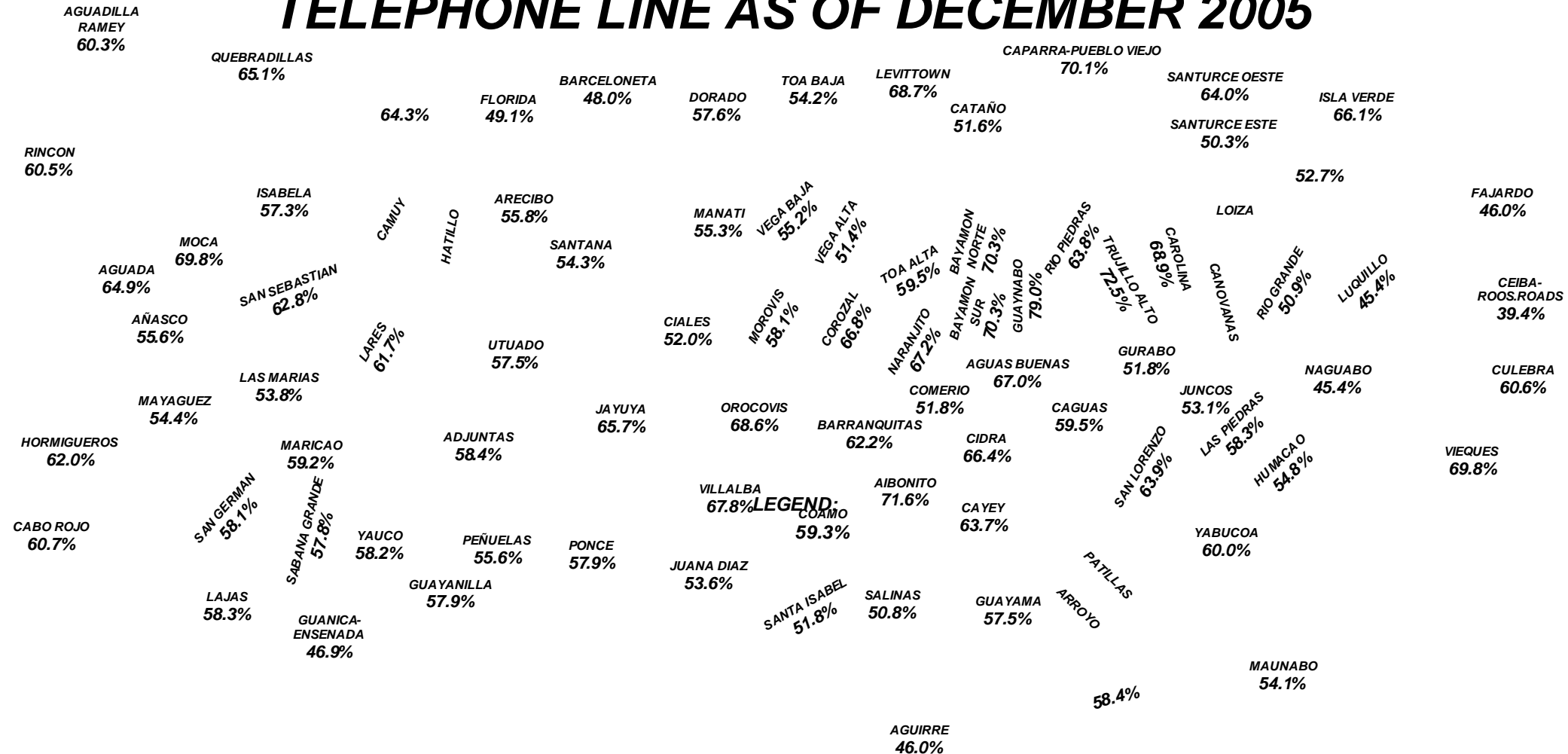
Regression Statistics	
Multiple R	0.646366
R Square	0.417789
Adjusted R Square	0.405908
Standard Error	3.45348
Observations	51

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	419.3601	419.3601	35.16198136	3.00217E-07
Residual	49	584.3995	11.92652		
Total	50	1003.76			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	9.915187	2.387615	4.152758	0.000130848	5.117098053	14.71328	5.117098	14.71328
X Variable 1	0.592103	0.099853	5.929754	3.00217E-07	0.391441074	0.792764	0.391441	0.792764

# **Appendix B**

# PERCENTAGE OF HOUSEHOLDS WITH A PRT TELEPHONE LINE AS OF DECEMBER 2005



## LEGEND:

METRO NORTH 57.2%

METRO SOUTH 63.8%

METRO EAST 70.3%

METRO WEST 70.3%

METRO CENTRAL 70.7%

ISLA NORTH 57.3%

ISLA SOUTH 56.7%

ISLA EAST 51.4%

ISLA WEST 59.3%

ISLA CENTRAL 61.1%



DESIGN.: ING. RITA GONZALEZ

DRAWN: J. SANTANA

DATE: 02-02-2006

PAG. \_\_\_\_ OF \_\_\_\_